



Proposed Revisions to 314 CMR 4.00: Massachusetts Surface Water Quality Standards Regulation

Additional Cold Water Stream Designations

MassDEP Proposes to Designate 153 New Cold Water Streams

Background and Reason for Change

The purpose of the 314 CMR 4.00: Massachusetts Surface Water Quality Standards (SWQS) regulation is to restore, enhance, and protect the chemical, physical, and biological integrity of surface waters in Massachusetts. The SWQS were adopted to designate the most sensitive uses for which surface waters are to be regulated, prescribe the minimum water quality criteria required to sustain those uses, restore waters to those uses, and maintain high quality waters.

One of the surface water uses is as habitat for cold water fish. Cold water fishes require cold, well-oxygenated water to thrive. Generally, cold water fish habitats are sustained by cold groundwater inputs, dense tree canopy, and/or the lower air and ground temperatures of higher elevations. These habitats are unique and sensitive to environmental changes. In order to protect and maintain these waters, MassDEP's Watershed Planning Program lists surface waters that meet *Cold Water Fishery* criteria as *Cold Water* in the SWQS tables found at 314 CMR 4.06. *Cold Water Fisheries* are waters in which the average of the maximum daily temperatures over a seven day period generally does not exceed 68°F (20°C) and conditions are capable of supporting a year-round population of cold water aquatic life.

As part of MassDEP's monitoring and assessment of rivers and streams over the last 30 years, new *Cold Waters* have periodically been identified and then designated in the SWQS. In addition, the Massachusetts Division of Fisheries and Wildlife (MassWildlife) has performed extensive monitoring of fish populations and compiled a list of rivers and streams which support cold water fishes (some of which are stocked with fish). These waters are designated as *Coldwater Fish Resources* or *CFRs* in the MassWildlife regulation at 321 CMR 5.00. Some of these *CFRs* are already designated as *Cold Water* in the SWQS. *CFRs* that are not designated as *Cold Waters* are still protected as "existing uses" (uses attained in a waterbody on or after November 28, 1975). Existing uses are informally tracked; therefore, listing a surface water as a *Cold Water* in addition to it being a *CFR* reinforces its protection and assures that if the cold water habitat is impaired (degraded), a Total Maximum Daily Load (TMDL) could be developed to restore it (see 314 CMR 4.03(1)(c)).

Proposed Revisions

The proposed revisions would add 153 *Cold Water* streams to the tables of the SWQS. These *Cold Waters* were derived from MassWildlife's existing *CFRs* that meet SWQS criteria. These



slimy sculpin
Cottus cognatus

Cold Water Fishes of Massachusetts

- (a) longnose sucker
(*Catostomus catostomus*)
- (b) slimy sculpin
(*Cottus cognatus*)
- (c) lake chub
(*Couesius plumbeus*)
- (d) American brook lamprey
(*Lampetra appendix*)
- (e) burbot
(*Lota lota*)
- (f) rainbow trout
(*Oncorhynchus mykiss*)
- (g) rainbow smelt
(*Osmerus mordax*)
- (h) landlocked salmon
(*Salmo salar*)
- (i) brown trout
(*Salmo trutta*)
- (j) brook trout
(*Salvelinus fontinalis*)
- (k) lake trout
(*Salvelinus namaycush*)



Eastern brook trout (EBT)
Salvelinus fontinalis

DISCLAIMER: The descriptions of the current SWQS regulation and the proposed revisions to it included in this document are for informational purposes, only. The actual SWQS regulation shall control in the event of any discrepancy with the description provided. The proposed revisions may or may not be adopted into law, and are subject to change without notice. As a result, no person in any administrative or judicial proceeding shall rely upon the content of this document to create any rights, duties, obligations or defenses, implied or otherwise, enforceable at law or in equity.



Additional Cold Water Designations (cont.)

proposed *Cold Waters* are distributed within 13 watersheds, with the Westfield River Basin having the greatest number of proposed streams (27).

Coordination with Other Groups

Since the 1990s, there has been growing concern that Massachusetts and other New England states were beginning to lose *Cold Water Fisheries* due to widespread development that increases impervious surfaces, water withdrawals, and both point- and non-point source pollution. There have also been concerns regarding the potential for impacts from climate change. Around 2004, meetings were held between representatives from MassDEP, MassWildlife, the MA Office of Energy and Environmental Affairs (MassEEA), and the U.S. Environmental Protection Agency (USEPA) involving the designation of a subset of MassWildlife's *CFRs* as *Cold Waters* under the SWQS. These representatives agreed that new waters that meet the following criteria could be added to the existing list:

- ◇ Sampling occurred between July 1st and August 31st
- ◇ The fish population was comprised of greater than 50% cold water fish
- ◇ The stream temperature was less than 20°C (68°F), and
- ◇ If there is a single species of cold water fish, there must be a documented age distribution indicative of a reproducing population

Based on this agreement, in 2006, over 100 streams recommended by MassWildlife were added as *Cold Water* to the SWQS. Again in 2015, coordination between MassDEP and MassWildlife resulted in a list of approximately 300 *CFRs* meeting the agreed-upon criteria, a subset of which are now proposed for addition to the SWQS. The *CFRs* that are not currently being added require further review of differences in their mapping and identification between MassDEP and MassWildlife.

Regulatory Implications

All proposed *Cold Water* segments are already *CFRs*. Listing waterbodies as *Cold Waters* in the SWQS adds regulatory transparency, provides for periodic assessment of perennial *Cold Waters* by MassDEP, and requires restoration of impaired waters pursuant to the Clean Water Act. Discharges permitted through the National Pollutant Discharge Elimination System and MassDEP's Surface Water Discharge Permit programs routinely consider whether the receiving water is either a *CFR* or a *Cold Water* in setting their permit limits, and entities subject to the Water Management Act (WMA) also already consider whether their withdrawals will impact a *CFR*. Again, since all the proposed *Cold Waters* are already *CFRs*, there will be little impact to the permitted community.

For More Information:

For MassWildlife's *CFR* Regulations, see <https://www.mass.gov/regulations/321-CMR-500-coldwater-fish-resources>

For MassWildlife's *CFR* Interactive map see <https://mass-eoeaa.maps.arcgis.com/apps/webappviewer/index.html?id=56ddeb43ffc642feb3117ce7ebd1aa43>

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